

Twelve Diseases That Changed Our World

By Irwin W. Sherman

ASM Press, 2007.
232 pp., Illustrated. \$29.95 (softcover).

In the preface to his book *Twelve Diseases That Changed Our World*, Professor Sherman tells the reader that his aim is not to catalog past diseases and tell of their historic consequences but to examine the lessons learned from past “plagues” and how they might enable us to deal with “coming plagues.” Moreover, he tells us that his target audience is not the scientist, historian, or medical professional but is, rather, the general reader. Over the ensuing 12 chapters, for the most part, he achieves this challenging goal, using a writing style that is easily accessible to his target audience. Each chapter follows a similar outline, beginning with an introductory anecdote that is followed by a discussion of the disease that highlights etiology, transmission, and therapy and that ends with consequences or lessons learned.

The book begins with the story of 2 genetic diseases—porphyria and hemophilia—and their role as seeds of political change in Europe over the past 2 centuries. The first chapter illustrates the inseparability of disease and culture. The second chapter, “The Irish Potato Blight,” details how a plant pathogen, *Phytophthora infestans*, rapidly transformed a single-crop economy and led to massive starvation and an exodus of people. The ensuing chapters catalog 9 human infectious dis-

eases. Chapter 3 details the scourge of cholera, focusing on the institution of sanitary reforms that controlled it and its impact on the nascent field of public health. Chapter 4 introduces the reader to smallpox and the concepts of disease control by variolation and of disease eradication by vaccination, the latter being a technique that remains a defensive cornerstone against known and possibly emerging infectious diseases. Plague, the subject of chapter 5, illustrates how an enzootic infection can cause explosive outbreaks that can be effectively controlled only by quarantining infected persons. The next chapter, “Syphilis: the Great Pox,” shows how social stigma against those who have an infectious disease can lead to discrimination and marginalization of minority groups. In addition, this chapter describes how advances in the treatment of syphilis ushered in the era of chemotherapy. The next 2 chapters introduce tuberculosis and malaria and highlight how social and economic factors, as well as the emergence of antimicrobial resistance, enable disease persistence. Moreover, as diseases for which effective vaccines have yet to be developed, they show the limitations of the science of vaccinology. Chapter 9 provides an overview of yellow fever, a disease that serves as a model of how infectious diseases are constantly evolving and how, in an interconnected world, they can accidentally be imported. The final 2 chapters discuss influenza and HIV/AIDS, diseases that serve as sobering reminders of yearly and ongoing “plagues” whose control poses formidable challenges despite advances in medical technology and science.

From start to finish, this short book should prove to be interesting and informative for the general reader. Each chapter includes historical anecdotes and illustrations that are often drawn from first-hand accounts. Basic biological concepts and disease states are explained in simple,

straightforward language, often illustrated by lucid analogues. However, for medical professionals and infectious diseases physicians, sections about disease pathogenesis, clinical manifestations, chemotherapy, and prevention are too basic and can be distracting. Moreover, some discussions of disease management are inaccurate or do not reflect the current standard of care. Lastly, some statements and conclusions seem extreme and highly speculative, such as suggesting that, but for hemophilia, the House of Romanov might not have fallen and the Bolshevik revolution might have been avoided.

Flaws notwithstanding, the book is a good starting point for the general reader who is interested in how disease has affected human history and how it will almost certainly do so again. Infectious diseases physicians will enjoy the historical accounts, with their engrossing tales and tidbits of information, and will come away with a renewed appreciation of the dynamic nature and wide-ranging impact of infectious diseases.

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Disinfection and Decontamination: Principles, Applications and Related Issues

Edited by Gurusamy Manivannan

Boca Raton, FL: CRC Press, 2007.
512 pp., Illustrated. \$139.95 (hardcover).

Decontamination and disinfection are basic components of any infection-control program. Health care institutions should provide a clean and microbiologically safe location. In addition, patients expect that any reusable instrument or device used for

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diagnosis or treatment has undergone a decontamination process to eliminate any risk for cross-infection.

Disinfection and Decontamination, edited by Gurusamy Manivannan, provides an overview of disinfectants and has a focus suitable for scientists who are developing new medical devices. There are several chapters that review nosocomial infections associated with indwelling devices and endoscopes. The chapters on biofilm formation and their contribution to infection are superb. The role of regulatory agencies in the process of submission of new products is well described, and the topic is difficult to find in other books. Chapters on microbiological concerns in the manufacturing process cover important information that is rarely touched on by other books. Excellent tables and figures provide step-by-step recommendations and instructions on how to test antiseptics for regulatory studies. This book is not exclusively written for clinicians, and although microbiologists and infectious diseases physicians may find the chapter on endoscopes and biocide action to be very useful, they may want to get more information than the book provides with regard to solutions and recommendations for common questions that arise in health care settings. In addition, several issues that are covered in different chapters are redundant (e.g., identical figures appear both in color and in black and white). The section concerning hand antisepsis—the most important antiseptic issue in health care—is short, and it does not reflect the impact of hand antisepsis on nosocomial infections. In addition, the hand antisepsis chapter does not include the key points of the draft recommendations of 2006 from the World Health Organization. The chapter on intracardiac devices focuses on the epidemiology and treatment of infections associated with these devices, but it lacks information on newer approaches to infection control (such as antiseptic coating of intracardiac devices). In summary, the book is an excellent choice for scientists

who are testing, developing, or improving antiseptics and disinfectants. Additionally, manufacturers of medical devices will find important information about how biofilm formation impacts the activity of antiseptic agents.

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MRSA

Edited by John A. Weigelt

New York: Informa Healthcare, 2007.
232 pp. \$99.95 (softcover).

MRSA is a small volume composed of 12 chapters that focus on clinically relevant issues regarding this important pathogen. The editor included topics that provide insight into the epidemiology of methicillin-resistant *Staphylococcus aureus* (MRSA) and into several clinically relevant infections. Medical and pharmacy students, residents, fellows, and practicing clinicians will benefit from the easy-to-read, well-organized summary of the key issues. In addition, each chapter provides an extensive bibliography that includes extensive references for recent and historically important studies of MRSA.

Chapters dedicated to epidemiology, genetics, and community-acquired MRSA infection provide context for subsequent discussions of specific infections and treatments. In the chapter by Lam and Wunderink (“MRSA Pneumonia”), the authors discuss the many facets of pneumonia caused by MRSA, as well as highlight the key diagnostic criteria relevant to hospital- and ventilator-associated pneumonia and the limitations of current data on community-acquired pneumonia caused by MRSA. Reed’s chapter, “Antibiotics MRSA Infections,” is particularly noteworthy, because it includes a complete review of agents that are currently available or are being developed, a user-friendly table, and an excellent review of pertinent

safety issues. The chapters dedicated to infection control, outcomes, and financial considerations are timely and highlight the need for a multifaceted approach to control of this important pathogen.

One potential weakness of this book is that the chapters are not entirely consistent. For example, linezolid is appropriately not included among the US Food and Drug Administration–approved agents for treating MRSA bacteremia in Reed’s chapter on therapy. However, it is included in Brunsvold and Napolitano’s discussion and table describing therapeutic options for MRSA bacteremia. Since these chapters were completed, results of a European study led the US Food and Drug Administration to issue a warning against the use of this drug for catheter-related bloodstream infections [1, 2]. Despite the fact that there was no excess mortality among patients infected with gram-positive organisms (most of whom were infected with *S. aureus*), this information is relevant to physicians who prescribe drugs. Hopefully, the complete data will be published to allow clinicians to better understand their significance and the potential role of this drug in therapy of catheter-related *S. aureus* bacteremia. In the meantime, linezolid is considered to be a salvage agent for *S. aureus* bacteremia [3].

The strength of this book lies in the expert description of the surgical management of MRSA infections. The authors consistently emphasize the importance of aggressive adjunctive surgical therapy for MRSA infections, including simple skin abscesses, diabetic foot infections, and deep-space infections that often accompany MRSA bacteremia. Early and aggressive drainage and debridement are critical to ultimate success in treating these complicated infections and, unfortunately, are not emphasized enough in the medical literature.

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